REMARKS

Claims 1 – 18 are in this application. Claim 2 has been cancelled and Claims 17 – 18 added.

The subject matter of claim 2 has been added to claim 1. Claim 1 has been amended to include that the visual marker protein is selected from fluorescent and phosphorescent proteins. Support for this was found in the previous version of claim 4. Support for new claims 17 and 18 is found in the previous version of claim 3.The information from claim 3 is now the subject of claims 17 and 18 respectively.

A new abstract is attached.

Page 14 has been amended to delete the hyperlink.

Sequence listing. According to the Action, the sequences on pages 7, 10 and 19 are missing a sequence identifier. These sequences are all represented by SEQ ID NO:13 and a sequence listing with this information was filed on January 19, 2010 along with the computer readable and attorney's statement. This information can be found in the electronic file wrapper of this application.

An amendment to incorporate SEQ ID NO: 13 on pages 7 and 19 is included with this response.

Claims 5 and 6 have been amended and therefore, it is respectfully requested that the objections to these claims be withdrawn.

The Examiner has rejected Claims 1 – 8 as being indefinite. This is

respectfully traversed.

Claim 1 has been amended so that the singular form of visual marker protein gene is used in both instances.

Applicants respectfully disagree with the Examiner's statement that "a large distance" is a relative term which renders the claim indefinite and that one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Applicants point out that "a large distance" is sufficiently descriptive to a person of ordinary skill in the art since the term is given in the textbooks. According to Shtilman, M.I. "Immobilization on Polymers" (1993), VSP BV, AH Zeist, The Netherlands, p. 369

> It is noted that a spacer's length and structure have an effect on the efficacy of immobilization in other cases as well. For example, the anticoagulant activity of heparin, immobilized on agarose derivatives through side chains of varying length, depended on the number of atoms in these chains and manifested itself only with the spacer's length > 10 atoms [338]. The structure of a side spacer also affected the transport of models and medicinal polymers into lysosomes [339].

Given the description of this passage and the knowledge of one of skill in the art, one of skill in the art would be able to determine the "large distance." As included in claim 1, large distance is used to describe the distance between the separating protein and surface to enable the immobilized enzymes to display native-like characteristics. One skill in the art would understand that the large distance is such the immobilized enzymes display native-like characteristics.

One of skill in the art would understand the term "native-like" characteristics

to be those known for the enzyme. In addition, the examiner's attention is drawn to the definition of native-like activity on page 7 of the specification.

As discussed above, Claim 3 has been amended and "such as" has been deleted from this claim.

Therefore, it is respectfully requested that the rejection under 35 USC 112, second paragraph be withdrawn.

According to the Official Action, Claims 1-8 are rejected under 35 USC 102(b) as being anticipated by WO99/57992. This is respectfully traversed.

The Examiner states that WO99/57992 teaches vector constructs comprising Green Fluorescent Protein, a Multiple Cloning Site and an affinitiy peptide. The affinity peptide aims for the purification of the protein that is to be expressed by the vector construct (See Fig.1) Said affinity peptide is specifically mentioned to be a histidine-rich polypeptide sequence."

The cited reference focuses on the use of histidine tags and histidine-based metal ion-affinity chromatography. By definition, the technology of the reference requires the use of a histidine tag and a bridging metal ion.

The current invention is neither restricted to the use of a poly his tag, nor should it require any bridging metal ion. The tag can be comprised of any polyamino acid tag, which interacts along a suitable, non-protein surface to form ionic, hydrophobic, polar and/or covalent bonds.

Therefore, the claims are not anticipated by this reference and it is

respectfully requested that this rejection be withdrawn.

The invention of this application presents a protein-friendly immobilization strategy, which can be tuned at the surface prior to protein binding and permit permanent covalent immobilization without exposing protein to harsh chemicals.

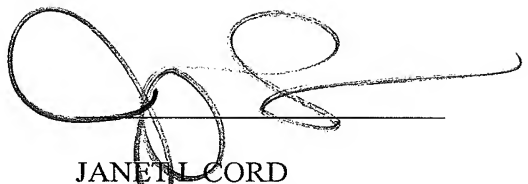
Use of the invention provides the ability to achieve permanent immobilization for potential use in bioreactors as well as temporary immobilization for purification purposes and qualifies this as a versatile and powerful approach to manipulate biologically active materials along appropriately tailored surfaces.

The invention of this application provides for a much more flexible binding strategy, whose possibilities are only restricted by the appropriate selection of favourably interacting surface groups and tags. The interactions formed are governed only by the chemical compatibility between potential bonding partners. The interactions are not shape-sensitive. In fact, the flexible tag can potentially conform to the shape of the surface, yielding a composite bond between multiple hydrophobic-hydrophobic groups, cationic-anionic groups, etc.

Therefore, it is respectfully requested that this rejection be withdrawn.

Please charge Deposit Account No. 12-0425 for any fees which may be due by this paper.

Respectfully submitted,



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